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ABSTRACT

A study of the benefits of early childhood education for mentally retarded children focuses on preschool services in the Sheffield Metropolitan District of South Yorkshire, England. Reviewed are incidence and etiological statistics along with early detection and multidisciplinary assessment procedures in the district. Educational programs based on individual assessments are described, and agencies and groups serving parents and the profoundly handicapped are considered. Aspects of teacher preparation and inservice training are recounted. Pointed out is the need for such future research as comparative studies of the effectiveness of preschool provisions in various settings and evaluation of the effectiveness of integrating mentally retarded children with regular class preschool children. (CL)

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COMMITTEE FOR GENERAL AND TECHNICAL EDUCATION

THE REMEDIAL ROLE OF PRE-SCHOOL EDUCATION: MENTALLY RETARDED CHILDREN

by

Mrs B WATSON

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Aim of the Study

The aim of this study is to show briefly how early childhood education may help mentally retarded children to:-

Compensate for their handicap, prepare them as well as possible for learning various skills and lead as normal a life as possible.

MENTAL RETARDATION

Knowledge of mental retardation and handicap is still limited. Descriptions of mental handicap are usually descriptions of behaviour (Segal 1974). In 1954, the World Health Organisation used the term "mental subnormality" to describe the overall category which was then subdivided into:

(a) Mental deficiency, where biological factors were the cause of damage to the central nervous system, and

(b) Mental retardation, where the causes were environmental due to social factors, birth injury or infection in the mother.

The terminology throughout the world is confused. In England the Mental Deficiency Act of 1913 stated that "idiot" and "imbecile" children would be dealt with under the Act. It became generally accepted that these were children with apparent IQs of below 50. "Feeble minded" children, apparently having IQs between 50 and 75, remained the responsibility of the Education Authorities. They were certified as "mentally defective" and admitted to special classes. "Certification" was abolished by the 1944 Education Act but "idiots" and "imbeciles" were still ascertained as "ineducable" and "unsuitable for education at school". The Mental Health Act of 1959 recommended that the terms "feeble minded", "idiot and imbeciles" be replaced by "subnormal" and "severely subnormal" and that the latter should

receive education and training in "training centres" run by the Health Departments. Since the Education (Handicapped Children) Act 1970, the education of the "severely subnormal" or "mentally handicapped" has become the responsibility of the education departments. This was effective from April 1st 1971. They have been included in the category of the "educationally subnormal" (E.S.N.) children which gives recognition to the fact that mental handicap is a continuum. For the purposes of this study the term "mentally retarded" is synonymous with the terms "mentally deficient", "severely subnormal" and "mentally handicapped", as it appears to be a kinder terminology. It also includes the profoundly multiply handicapped.

The need for the study

Research has shown the great importance of the early years of a child's development. Both biological and neurological studies suggest that during the first five years there are certain times when the child is especially sensitive to external stimuli which promote emotional development and the acquisition of skills. This is especially true in the child with disabilities and the younger a child is, the easier it is to compensate for handicap and deprivation, and also to prevent secondary handicaps developing. Early detection and assessment, together with the expansion of early childhood education, will help the mentally retarded child.

Outline of the study

This study will provide a short descriptive sketch of what is happening in pre-school remedial education for the mentally retarded in Great Britain, particularly concentrating upon one example, the provision and its remedial role in the education of the pre-school child in the Sheffield Metropolitan District of South Yorkshire.

Sheffield Project

Sheffield has a school population of 105,508. A list of Sheffield children of pre-school age for whom there was a definite diagnosis of mental retardation was obtained from the 'At Risk' Registers kept in the Central Health Clinic. These Registers are lists of children who are thought by the Health or Social Services Departments as being 'at risk' of developing abnormally because of physical or mental disabilities or social disadvantage. As part of the Inter Departmental (Health, Education and Social Services) Sheffield Development Project for the improvement of services for the Mentally Handicapped, an initial search census was taken on March 31st 1975, to find out the number of Mentally Handicapped in Sheffield, including the number of pre-school mentally handicapped. The results are as follows:-

Children under 5 years of age from Sheffield Metropolitan District with definite diagnosis of mental retardation by sex and source of reference, 31st March, 1975

Sex	Attend day nursery or day clinic	Attend special school	Resident in long stay hospital or home	On 'At Risk' Register with definite diagnosis of mental retardation	Total
Male	20	8	1	42	71
Female	16	14	2	22	54
Total	36	22	3	64	125

These figures do not include those for whom only developmental slowness has been ascertained, since these children usually 'catch up' on their milestones. It must also be remembered that these figures are a baseline and a larger hidden population may emerge later.

The age structure of pre-school retarded children identified by the Initial Search Census at 31st March, 1975

Sex	AGE-GROUP (Years)					All Ages
	1	2	3	4	5	
Male	1	10	14	18	28	71
Female	2	8	12	14	18	54
Total	3	18	26	32	46	125

As is to be expected the above figures suggest that more and more children become known to be retarded as school age is approached. To what extent this depends on severity, additional handicaps or social factors is not clear. The Development Project is to be fully evaluated by a research team led by Professor Heron, so data on these factors may emerge later.

Aetiology

In many cases the cause of the mental retardation of the pre-school children in Sheffield is unknown. Of the three year group (1967-69) studied by Joan Broom the following information was recorded.

Of a population of 84 children:-

Frequency of occurrence of aetiologies

39%	Mental retardation only
10%	no recorded aetiology
20%	Cerebral Palsy
21%	Down's Syndrome
5%	Spina Bifida with hydrocephalus
4%	Rubstein Tabi Syndrome
1%	Chromosome abnormality (non specific)
100%	

Holt (1972) found in London that there was no cause to be found for the retardation in about three quarters of all retarded children investigated. Nevertheless, this group is decreasing each year as more disorders are identified.

In the Manchester pre-school survey undertaken by Jefrees and McConkey in 1974 the following frequencies of occurrence of aeticlogies were recorded:-

Down's Syndrome	41%	Hydrocephaly	3%
Cerebral Palsy	7%	Microcephaly	2%
Unspecified brain damage	5%	Genetic disorder (other than Down's)	2%
Birth Injury	3%	Other aetiologies	9%
		Unknown	28%

Most of the children, in common with the Sheffield children were multiply handicapped rather than mentally handicapped. They were retarded in all aspects of development.

Early detection and Assessment

The identification of handicap should be made as early as possible. Research by Kushlick (1966) pointed out that only 1/4 of mental handicaps, for example, severe multiple handicaps and genetic disorders, are recognisable at birth because of abnormalities of face and limbs and body, as in a baby with Down's Syndrome. It is only after a child's problem has been recognised and identified that a remedial programme can be implemented. As Dybwad (1975) declared, "Early intervention programmes for the mentally retarded are one of the key issues in the treatment of subnormality". The survival of more babies with handicaps has in part been due to improvement of ante-natal care, particularly that of mothers known to be at risk of miscarriage. Survival is also due to greater obstetric care and modern techniques. The life span of the multiply handicapped has also been increased due to improved paediatric care and surgical techniques. Tests in early pregnancy can now detect defective

Table of Multiple Handicaps (Broom 1975)

In the 84 Retarded Children in the Sheffield Survey .48% were multiply handicapped.

Original Aetiology	Mental Retardation	Cerebral Palsy	Spina Bifida	Down's Syndrome	Rubstein Tabi Syndrome	Chromosomal Abnormalities	Unknown
TOTAL	33	17	4	18	3	1	8
Additional Handicaps:-							
Visual defects	7	9			1		
Blind	1		1				
Hearing defect	1						
Microcephaly	3	3					
Hydrocephaly			3				
Epilepsy	5	7	1				
Spastic Quadriplegia		12					
Spastic Diplegia		1					
Spastic Hemiplegia							
Hypotonia	3	3					
Heart defect							
Cleft palate	1						
Hyperactivity	2	2					

chromosomes so that parents can consider therapeutic abortion. Genetic counselling can give emotional and personal support to parents. The risk of having a Down's Syndrome child rises considerably with maternal age and genetic counselling is very necessary for those most at risk together with a comprehensive family planning advice service. The aim is to prevent handicapped children being born, but until the causes are known, some children will continue to be born with handicapping conditions.

Research by Heber and Garber in Milwaukee (1972) suggests that after birth, the younger the age of the child at assessment the more hopeful the prognosis for remediation and compensatory work. In Sheffield the Apgar assessment is given at birth. This assesses the heart rate, respiratory effort, reflex irritability, muscle tone, colour of body. Notification of birth is sent to the Area medical officer within 36 hours of birth. When the child is thought to be 'at risk' it is entered on the Handicapped Children Register or the Congenital Abnormalities Register. There may be neurological examination of the child, which can determine whether there is any abnormality of the Central Nervous System and estimate the child's developmental potential. Ideally the compensatory programme should start here. After ten days, the Health Visitor becomes the key person in early identification together with doctors and social workers. Using the Guthrie Test, she may detect the presence of phenylketonuria in the baby. Unless this is detected properly, mental retardation can be caused in the child, but this can be controlled by a special diet. The Health Visitor also looks for signs of microcephaly and hydrocephaly. It is unlikely that most doctors, health visitors and social workers will be able to build up experience for early detection of mental retardation to any but a limited extent. Illingworth (1974) described the "average" doctor as seeing a child with mental retardation once every four years and a child with Down's Syndrome once every 16 years.

In Sheffield, the child's health record is kept at the Family Clinics and the children 'at risk' are examined at regular intervals. Developmental Screening tests select children who need a thorough investigation at the comprehensive assessment centre. The Area Health Authority has appointed two medical officers to assess pre-school handicapped children. Besides the children 'at risk', they plan to screen all children at the age of three years. In spite of the "Sheffield Project", some pre-school children are still receiving little support from the existing services. As Broom (1975) points out, the services are not alerted early enough, diagnoses are often vague and do not always reach the Case Registers, or they remain on file without appropriate action being taken until a child reaches school age. Children with multiple handicaps are not always cross referenced in the records so that services may not be aware that a particular child with eg cerebral palsy or spina bifida, may also be mentally retarded. In an effort to improve Inter-Departmental communication, a regular monthly meeting has been established between representatives from the Health, Education, Psychological and Social Services Departments and a co-ordinator for the placement of handicapped children who has been appointed by the Education Department. The progress of pre-school retarded children is discussed and a summary of their needs prepared so that, as far as possible, appropriate provision can be made for them. The panel also joins with other colleagues, who have an interest in the young child with special needs, for lectures, films and discussions.

Many local authorities are establishing pre-school assessment services and it is hoped to extend and develop services still further when the committee currently examining the child health services under the chairmanship of Professor Court, makes its report. Two examples of advanced practice in other areas are to be found in Kent and at Southend in Essex. In Southend,

the assessment of pre-school children is a continuing process from birth. It is based on the need to assess the potentialities of children who are obviously handicapped and the abilities of children who appear to be potentially handicapped. Educational needs are used as a focus for assessment and help the Education Department to make appropriate educational provision for these children. The educational objective is chosen as a goal for all disciplines involved in assessment. Parents too are associated with all the procedures and with all the professionals from the birth of their child. Furthermore, parents of mentally retarded children under three years of age have joined together in a support group and they are collectively available to assist parents who have a mentally handicapped child.
The area health authority works closely with all the services and parents are approached within a matter of days of the birth or assessment of their child, by a local authority paediatrician and a member of the parents' group. They are given support and on-going counselling about the development of their child.

Multi-Disciplinary Assessment

As Mittler (1970) declared "It is important that each retarded child should be assessed and treated as an individual." After detection there should be on-going medical, social and educational assessment, remediation and support for the child and his family in the community.
Ryegate Multi-Disciplinary Assessment Unit at the Sheffield Children's Hospital is one of seven regional Assessment Centres in the country for the handicapped. The strength of the unit lies in its team approach to the handicapped child and his family. The multi-disciplinary team is led by a paediatrician, (see flow diagram) who is assisted by a full medical and nursing team, physiotherapists, occupational therapists, speech therapists, clinical psychologist, social workers and two advisory teachers. Consultants

are also seconded to the team as necessary, for example, a Consultant in Sub-normality, who also holds her own assessment clinic. Parents, too, become full members of the assessment team. A family with a child with a handicap is a handicapped family. The child cannot be considered in isolation but only as a member of a family. Most children referred are under 18 months of age. The assessment of the child is an initial assessment followed by regular reviews. In case of suspected metabolic, enzyme, dermatoglyphi or genetic disorders, overnight assessment can be arranged.

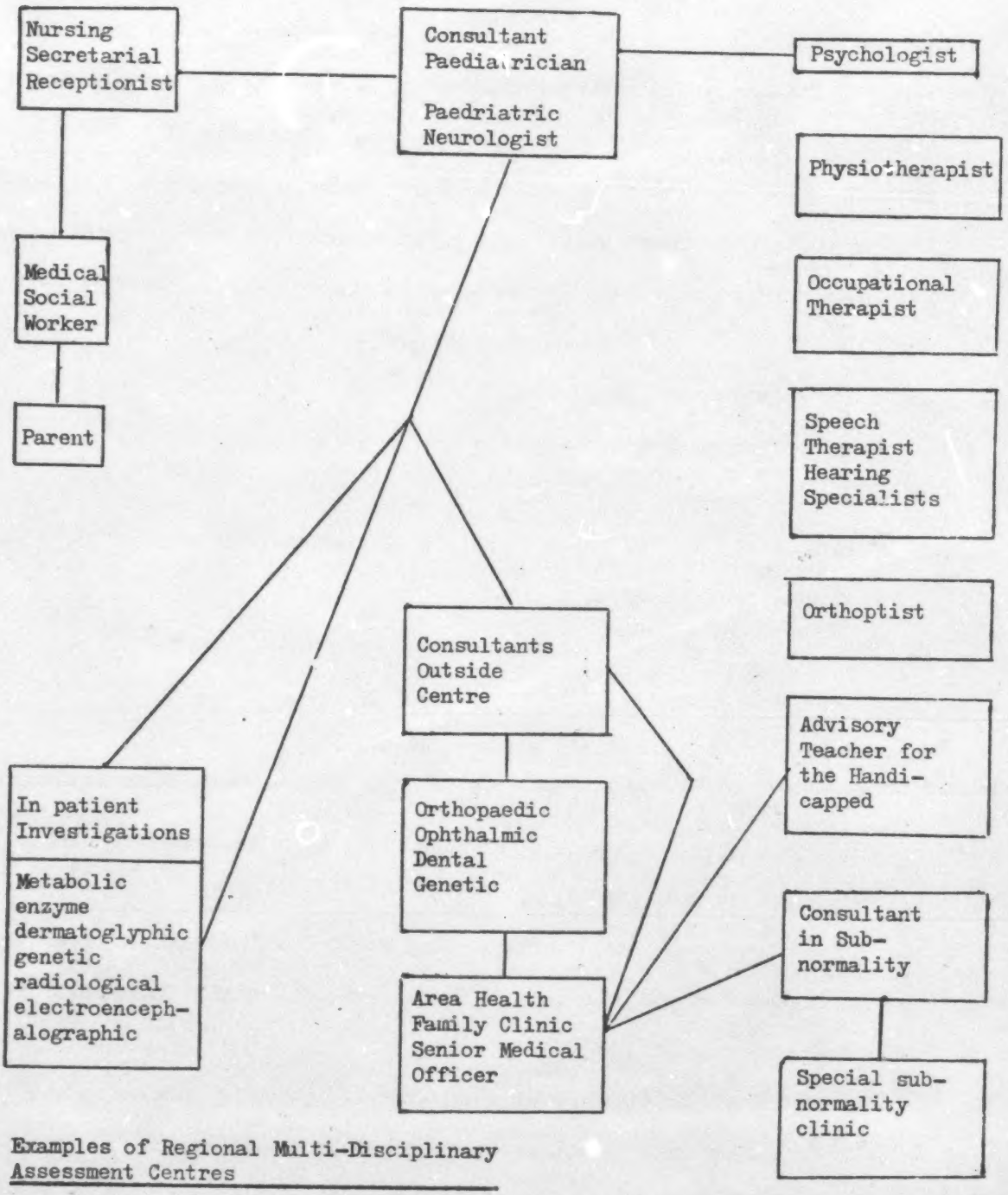
At the Wolfson Centre in London, diagnostic investigations to detect general disturbances, abnormalities in growth and nutrition, signs of malformations, defects of hearing and vision, the level of the child's developmental abilities and behaviour take place over several days on either an in-patient or out-patient basis. There is a small unit where one or two families can stay for a few days. The family can collaborate in the assessment and be supported realistically by all the disciplines in planning an on-going programme of management and education, which fulfils the child's and parents' requirements and can be pursued whether the child is in the centre, at home, in a nursery, school or hospital.

Educational Assessment and Compensatory Programming

At the multi-disciplinary assessment centres assessment is not merely descriptive but usually prescriptive too. After assessment, each child is provided with a programme by the teacher, to help him maximise on his strength, compensate for his weaknesses and prevent secondary handicaps developing. The programme will be carried out at the Centre or at home. Assessment of the retarded presents a wide range of problems, the children are often multiply handicapped, with gross physical problems in addition to retardation. They find it difficult to concentrate, are unco-operative and difficultto motivate. They cannot sustain play and have language

FLOW DIAGRAM FOR THE COMPREHENSIVE MULTI-DISCIPLINARY ASSESSMENT OF THE MENTALLY RETARDED CHILD

For example, Ryegate, Sheffield



Examples of Regional Multi-Disciplinary Assessment Centres

1. Newcomen Centre - Guy's Hospital, London
2. Pendlebury Children's Hospital, Manchester
3. Ryegate Centre, Sheffield
4. Wolfson Centre, London
5. Aberdeen
6. Newcastle, Child Development Centre
7. Plymouth, Child Assessment Centre

difficulties and problems with self image, so that there is almost a total absence of suitable assessment instruments developed for use with this group (Shakespeare 1970). Nevertheless, because of the increased provision of services for very young retarded children it is important to be able to assess their needs and plan programmes for them. Initially, it is necessary to find out at what stage the child is functioning so that there is a base-line on which to commence work. All of this takes time and is not easy, but information from parents and from discussions and detailed systematic observations can help, together with the following used with the advice of the psychologist and speech therapist.

1. Mary Sheridan's Charts of Development from 0 -- 5 years.
   Stycar sequences.
2. ITPA Illinois Test of Psycholinguistic Abilities.
3. English Picture Vocabulary Test.
4. "The Psychoeduational Evaluation of the Pre-School Child".
   Haussermann Approach. (Jedrysek, Klapper, Pope, 1972).
5. Observation of the child's gesture and mime.
6. Reynell Language Assessment Scales.
   Finding out the child's level of receptive and expressive language.
7. Frostig Tests and programmes.
8. Observation of the child's play. Kay Mogford at Nottingham University has prepared charts of a child's repertoire of play with particular toys which proves helpful.
9. The Hester Adrian Child Development Chart (Manchester University). The chart is a sequence of stages of normal child development. It helps parents and teachers to observe children's development systematically and as a sequence. It helps to work out the child's strength and weaknesses in readiness for planning activities.

10. The Behaviour Assessment Battery devised by Chris Kiernan at the London Institute of Education will also provide a basis for programming the profoundly retarded and multiply handicapped child's activities.

As Mittler (1970) declared, "All good education is based on a painstaking process of assessment and programming". From research, (eg Woodward and Stern 1963) it is probable that mentally retarded children do develop sensory motor intelligence and skills according to the stages described by Piaget for normal children and that other aspects of development can be related to this, perhaps more effectively than to such factors as mental age or chronological age. The interdependence of the various aspects of development is highlighted and the inadvisability of considering one area of functioning without making reference to the whole framework of development is implied. The mentally retarded young child is retarded, although not equally, in all aspects of development for example in physical skills, locomotion, visual and auditory skills, language and speech, fine motor and manipulation skills, in cognitive skills, social development and play so we need to obtain a profile of his strengths and weaknesses. This may be obtained by using a criterion referenced assessment, such as the Hester Adrian Chart or the Behaviour Assessment Battery.

Education programmes need to be developed for each individual based upon the assessment and designed to move the child from the present stage of development to that which normally follows. A child may be more advanced in one area than in others and the programme will take account of this. A programme might include the following:-

Positioning

Stimulation to move

Manipulation tasks

Discrimination skills: auditory, visual, tactile

Language (receptive/expressive)

In themselves the programmes constitute a continuous assessment: they are carefully structured and sequenced and supplement the child's natural development by providing him with opportunities to gain relevant experience at the appropriate developmental level, when the child is at risk of impaired perceptual functioning by virtue of the fact that he is mentally retarded. A handicapped child has the same needs as other children described by Mia Kellmer Pringle for love, security, discipline, stimulating experiences and the need for responsibility and independence. Normal children actively seek out experiences for themselves. The mentally retarded child has little drive and misses out on essential experiences. Mittler (1974) distinguishes two kinds of restrictions on the development of the retarded child:-

(a) Primary restrictions, imposed directly by the handicap itself, such as restrictions imposed by visual or hearing impairments, which distort the child's experiences of his environment, or motor impairments which prevent the child exploring his environment.

(b) Secondary restrictions, such as those which arise through inappropriate handling. Parents may be fearful and overprotective and so discourage the child from exploring and finding out. He may be discouraged from feeding himself or from dressing himself because he takes such a long time.

The mentally retarded child is slow to develop. Although we might wait for ever for him to develop, we must not try to develop a skill for which the child is not ready. We must achieve a balance. The mentally retarded child needs physical experiences such as seeing and touching a variety of shapes, sizes, textures and weights and hearing a variety of sounds. Those experiences which cannot be found in everyday life must be organised for the child (see "The Model for creating the Learning Situation" devised by Cunningham and Jeffree). A team approach to programming is essential. The actual number of professionals involved with each child will vary with the

complexity of the handicap, but parents will always be encouraged to be actively involved as educators.

Here are examples of programmes of work from the Parents Workshop at the Hester Adrian Centre in Manchester.

Peter aged 4 years

Assessment mental retardation

Problem Chronic constipation

Observation Over 13 days a record was made of the child's toilet habits. The mother placed the boy on the toilet and pleaded with him. He always started crying and his mother hugged him and put him to bed.

Conclusion The social reward appeared to be maintaining the boy's constipation.

Remedial Programme and Training The mother had reported the boy liked playing in the bath. At first after taking a laxative the boy sat on the toilet next to the bath filled with water and toys. After he had passed faeces he was praised, hugged and placed in the water. If no faeces were found the mother ignored the boy. Training took two weeks. Time spent on the toilet was reduced from 2 hours to 15 minutes and the boy asked for the toilet himself.

Follow up The boy was regular in his toilet habits and free from constipation without laxatives, even 8 months after training.

Examples of Programmes of Work

A.W. - 4 years, 2 months

A. Self Help Programme

Putting on Socks

1. Put the sock all the way over the foot and one inch from the top. (Command: "Put the sock on .....")
2. Put the sock on foot, stopping at the ankles. (Command: "Put the sock on .....")
3. Put the sock on, stopping at the heel.

4. Put the sock on, stopping at the middle of the foot.
5. Put the sock just over toes.
6. Place sock beside foot.

B. Speech Programme

1. Select five known objects, e.g. car, ball, house, chair, doll, Point to each and name them.
2. Hold the child's hand and point to the objects, naming them.
3. Ask the child to name the objects.
4. Request an object by name which the child must give you.
5. Encourage the child to request an object which you can give her.
6. Ask the child to give you "something you can ride in". Request other objects by a similar phrase.
7. Encourage the child to request an object in this manner.

Pre-School Educational facilities and support

Education Authorities are increasingly aware of the need to make some form of educational provision available to mentally retarded children before the age of 5. Under the 1944 Education Act, local authorities have a duty to provide education for handicapped children from the age of 2 if they consider the child will benefit. Mentally retarded children may attend normal nursery schools, nursery classes in Special Schools, attend Voluntary pre-school playgroups run by parents or be visited at home by a teacher who may be based with the psychological service, the home tuition service, the advisory service or be school based.

In the nursery school and playgroup the child will mix with ordinary children and may benefit from normal play, social and learning experiences. Nevertheless, retarded children do not automatically benefit from being placed in a

THE MODEL FOR CREATING THE LEARNING SITUATION (CUNNINGHAM AND JEFFREE 1971)

Observation and Assessment

1. Assessment using tests to produce a profile of strengths and weaknesses.
2. Observations –
   a) during specific activities – recording
   b) of child in all situations.

Need for a base for assessment and observation – normal child development.

↓

Selection and Analysis of Task

1. Selection –
   a) of task relevant for child
   b) at correct level of ability
2. Analysis. Identify and arrange task in series of smallest possible steps.

State what it is the child will be able to do after the training that he could not do before.

↓

Presentation of Task

1. Produce favourable conditions for training (learning is pleasant and enjoyable).
2. In relation to child and task, decide how, when and where to train.
3. Progress by small steps – complete mastery at each stage.
4. Reward appropriately, consistently, immediately.

↓

Evaluation

Evaluate –

(a) by using tests which measure if the child can do what you said he would be able to do.
(b) constant observation during training and at other times.

stimulating environment, nor from being offered a watered down version of normal curriculum. Some children will have specific learning difficulties, attention problems, sensory or motor handicaps and behaviour or communication problems which need to be compensated by carefully devised teaching programmes.

Some playgroups now have leaders and volunteers who are receiving training in child development, stimulating play and language and meeting the needs of the handicapped. Advisory Teachers and psychologists may also visit to help plan individual programmes for the retarded and support for parents who are highly involved with the playgroup.

In the nursery school, there are trained teachers and nursery assistants, but they may have a problem of reconciling the undoubted social advantages of mixing the mentally retarded with normal children with the danger of neglecting specific educational and developmental needs which might best be met in a special school with specialist teachers, where parents are actively involved and where parent-workshops are held. (Mittler 1974).

Which provision is best for which children? General prescriptions are not possible and the needs of each individual can only be determined by careful assessment. Parents will want their child to be in as normal an environment as possible and will try to find a place in a 'normal' playgroup or nursery school and many retarded children will benefit, especially if monitored and supported by the specialist professionals. Others, who have more specific needs, will be better in a special school or nursery. "Unrealistic attempts at integrating these children may involve denying them the understanding and specialised care and attention which alone can make possible the realisation of their very limited potential. It is not to their advantage to put them in any situation where their progress is restricted

by a lack of specialised attention, where differences may be almost inevitably emphasised and where they are more exposed to the risk of isolation from children who are not handicapped. It may also be questioned to what extent it is ethically justifiable to reduce the attention a teacher can give to the rest of the children on account of severe demands imposed by a group of those who are severely handicapped." (Department of Education and Science 1974.)

Pre-School provision for the mentally retarded in Sheffield

In Sheffield there is a wide and developing provision for pre-school retarded children.

The Advisory teachers for handicapped pre-school children visit the children in their own homes and offer an educational counselling service, and advice on suitable toys and the use of the toy libraries. They also help to place children in playgroups and offer information about the social services, speech therapy and physiotherapy services and literature about the mentally retarded. They also support children in playgroups, advise and run in-service training courses for teachers and assistants in ordinary nurseries and the social services day nurseries.

At Ryegate, the advisory teachers in Assessment of handicapped children run regular parent workshops to give guidance on day to day management and information about education needs and provision. Parents are helped to become "partners" in the assessment, treatment and the education programme of the child.

Parent Workshops were pioneered by the Hester Adrian Centre in Manchester. At Ryegate they are held weekly in a small tutor group and include lectures from the professionals, group discussions, demonstrations and films. Parents are helped to observe their children's development realistically and systematically. Practical activities are complemented

by handouts and notes which can be referred to even after the course has finished.

For those children who live within Sheffield and who are multiply handicapped and not attending other pre-school facilities, the Children's Hospital School seconds a teacher to run a nursery at Ryegate with the Advisory teachers and nursing staff. Advice is also given by the Speech Therapist on feeding and language development and by the physiotherapist on positioning the child. After the age of two years, on-going assessment and programming of some retarded children may be carried on at Kirkhill School, which is a school based assessment centre for children with mixed handicaps who experience severe learning difficulties, and has close links with Ryegate. Multi-disciplinary provision helps to meet the educational, medical and sociological needs of each handicapped child and family.

The work of the school entails a careful examination of the nature of each child's learning handicap and the setting up of an appropriate programme which will help to place each child in a school best suited to his needs. It is hoped eventually that Kirkhill will be able to work with children and their parents during their first two years and it is planned that, in new premises to be completed next year, it will become a community resource centre for the pre-school handicapped child. For example a mother with a newly born Down's Syndrome baby could immediately be referred to the school for support and on-going educational advice.

The multi-disciplinary approach is essential to Kirkhill's aim of providing a complete service for each handicapped child, together with help and counselling for each family where necessary.

At Woolley Wood Special School for the mentally retarded child the main purpose in beginning an educationally orientated intervention programme is to counter inappropriate handling and so prevent numerous secondary handicaps developing, while encouraging the maximum rate and extent of development in the retarded child. The school has good liaison with the Ryegate Assessment Team, the Family and Community Services Department (which is the name for Sheffield's Social Services Department), speech therapists, physiotherapists and psychologists. Parents are helped to improve their handling of their relationship with their child. The policy of the school is to act as far as possible in an advisory and supportive role, suggesting what parents might do and how, and helping them to do it. Parents are encouraged towards a better understanding of their child's handicap. They are able to discuss their problems and ideas with the school and are able to be put in touch with other agencies who might help. Toys and equipment are available from the school's own library. It must be emphasised that children under three years are not taken into school, but are seen first in their own homes. Parents are then encouraged to bring the child into school, perhaps for a few hours once a week. Eventually, when the child is ready, he may be offered a school place, part-time at first and gradually increasing to full-time. Woolley Wood also has an integration project with an "ordinary" primary school. The project aims at bringing retarded children into closer contact with other children of the same age in order to provide the handicapped with more normal models of behaviour, stimulate their language and encourage a greater degree of independence. Provision for pre-school mentally retarded children is also made by Family and Community Services at Carbrook Day Nursery for the handicapped, Hallamgate residential nursery and at Heeley ordinary day nursery

where ten places are provided specifically for the mentally retarded. They give priority to children from broken homes, one parent or problem families.

A research project has been studying the level of integration between the retarded children and the ordinary children attending the nursery and it has been found that the fact of integrating these children with others has encouraged more instances of co-operative play.

It has been observed that these children now play more normally together and the retarded children have imitated their peers in both play and language.

Early intervention can also be aided by the fostering of the mentally retarded who cannot live at home, by a family who can help in the remediation programme of the child. This will be arranged by the Family and Community Services.

Parents

Parents are important detectors of many handicapped children. Mothers and grandmothers (!) usually suspect if their child is different especially if they have other children. Sparrow (1974/75) in the National Children's Bureau publication "Concern" declares that we must structure mothers' observations and help them present them in a way that can be appreciated by the professionals. The majority of the mentally retarded children require specialist help and attention if their development is to be advanced. As there are insufficient professional resources to give on-going one to one contact over prolonged periods of time to help the child's development, it appears logical to help parents develop their expertise in assessment and treatment to help them further their child's development. They are the primary influence on their child's development and provide the necessary contact with the child that no professional can emulate. Active

co-operation between parents, professionals and the voluntary societies can also help in early detection and remediation or compensatory programmes being devised for the children. At the Norfolk Baby Group for slow developers, the Sheffield Society for Mentally Handicapped Children has joined forces with the medical, social, educational and psychological services to work with parents in order to help them meet their baby's educational development needs.

The Newbould and Chaucer Toy Libraries run by the Psychological Service are open to children who are mentally, physically, or culturally handicapped. Such children are often multiply handicapped, having a combination of two or more handicapping conditions. The Toy Library has two main functions:-

1. To provide a loan service of toys to the above type of child, and to guide the parents as to how to help their child to derive the maximum educational benefit from the toy. In addition, help is given to parents in the choosing of toys which will be suitable for their child.
2. To help the parents to understand the nature of their child's handicapping condition, and by so doing to help them to develop their child's full potential.

Children and their parents are seen individually by appointment by the educational psychologist. At this meeting, the child's interests, present abilities, specific aptitudes, and any particular problems (eg eating, sleeping, toilet-training etc) are discussed with a psychologist; certain categories of toys and types of activities are then recommended.

Many voluntary organisations and local authorities have pioneered work with the pre-school retarded child. Derbyshire has home visiting teachers who advise parents on how to develop education programmes with children. One home

teacher provides a weekly programme for the mother to help language development and body awareness in the child.

Derbyshire has also set units for the mentally retarded in ordinary schools at Swanick including a unit for the profoundly retarded and multiply handicapped and a unit in a Secondary Comprehensive School. In the primary school, as there is no ordinary nursery, there is no integration with a normal peer group as there is with the older children. The staff room for the staff of the whole school is situated in the unit ensuring that the unit staff do not become isolated and providing the ordinary teachers with many opportunities of observing the retarded children.

Bromley in Kent also provides several units for the retarded, including one for the multiply handicapped, in Primary Schools. The children join with their peers for physical education and music and certain children join in for other activities. There is integration of the staff, and the unit teachers often hold responsible posts within the main school.

Manchester, Birmingham, Newcastle, Southampton and Bristol have over 50% of their retarded children attending pre-school facilities.

The Profoundly Handicapped

New approaches have also been developed for those needing very special programmes or care due to physical, sensory or severe language impairments, behavioural problems and multiple handicaps. The Hilda Lewis Centre, the Cell Barnes Hospital at St. Albans, Lea Castle Hospital at Kidderminster, Lynebank Hospital, Dunfirmline, the South Ockenden Hospital, Essex and the Stoke Park Hospital in Bristol have developed assessment clinics for the retarded. These are complemented by education programming of the child at home or in long term care in the hospitals, where the children are from broken homes or have severe behaviour problems.

At Queen Mary's Hospital, Carshalton, experiments in applying behaviour modification programmes have produced changes of behaviour of the children. Emphasis has been placed upon teaching by the Nursing Staff as opposed to domestic duties. All the staff in the experiment have been given specific training in behaviour modification techniques, but it has been emphasised that adequate staffing ratios are essential for maintenance of the programmes and also adequate materials for activities.

At the Norbriggs Hospital School in Derbyshire, the staff have applied the Kephart sensori-motor training programmes to meet the children's needs and have taken them to a new dimension. Both the teaching and the non-teaching staff have received training in programming and join together in a team-teaching situation with the parents of the children whose ages range from 18 months to 8 years.

Attitudes are changing towards the provision for the profoundly handicapped in schools. Many special schools are trying to create flexible special care or support areas rather than isolated units. The support areas might only be needed by many of the children on a part-time basis, such as special toilet facilities, withdrawal rooms, or support from specialist teachers of the hearing or visually impaired, the speech therapist or language development teachers. The multiply handicapped are spending more time with their peers within the special school and meeting members of the community who help on a voluntary basis. Children from hospital schools too, such as St. Joseph's Annexe, which is part of the Sheffield Children's Hospital, are coming out into the community for swimming, hydrotherapy, environmental and social experiences and to join in activities within other schools.

In London the Hornsey Centre at Muswell Hill has pioneered pre-school education and intervention in the home setting as a framework for dealing with the mentally and multiply handicapped child. It is not a local authority centre but was set up and maintained by a Trust Fund. It has high staff ratio, currently three children to one 'teacher'. The teachers are mainly untrained in the formal sense and none receives full Burnham pay. The children's ages run between $2\frac{1}{2}$ years to 7 years.

Each teacher has been put through a staff training programme developed by Chris Kiernan and Barbara Riddick (1973) which outlines the use of operant conditioning techniques with retarded children. The parents have a series of talks and discussions and then the psychologist from London University works with them at home.

All the children are assessed on the Behaviour Assessment Battery (Kiernan and Jones 1974) and then provided with programmes which cover feeding, dressing, toileting, walking and also receptive and expressive language development. The children's progress and behaviour is monitored by the psychologist at home and at school. The aim is to develop self help skills and to generalise the children's acceptable behaviour between different situations.

The Teachers

To help meet the educational needs of the handicapped child and his family, greater attention is being paid to the training of teachers. Sheffield, for example, has created a highly qualified team of teachers. The advisory teachers and home visiting teachers all hold advanced education qualifications. Many successful teachers of 'normal' children have taken part in an intensive inter-professional one term's induction course for developing resources for learning in the handicapped child. The full time course usually takes six

teachers on full pay. It has a balance of study of child development, learning theory, recent research findings with practical experience of inter-disciplinary assessment, observations, social services, work with pre-school children and the development of systematic programmes and meaningful curricula for learning, language and living for the handicapped. So much interest has been stimulated that several other professional workers, including speech therapists, physiotherapists, nurses and social workers have joined in study visits, the films and weekly seminars. The teachers from this course have supplemented the successful team of trained teachers for the mentally handicapped.

The course is based in rotation at one of the city's special schools and Head Teachers are the tutors supplemented by lecturers from other professions. Already over fifty teachers have taken part in these courses. The needs of staff already in training schools are not neglected and there have been regular school and teachers' centre based courses and workshops covering aspects of learning theory, behaviour modification techniques, assessment and recording, language and curricula development and social and support services for the handicapped. Other members of staff, including Child Care Workers and escorts on the school transport, have received special in-service training to help meet their needs and develop their skills. In-service training of teachers is also undertaken by the Colleges of Education in Sheffield and the Sheffield Institute of Education in conjunction with the Education Department. City College undertakes a year's advanced course for experienced teachers leading to the award of the Diploma in Special Education. At Totley-Thornbridge College there are initial courses for training teachers of the mentally handicapped and slow learners. The Extra Mural Department of Sheffield University also joins with the Education Department in running

inter-professional courses and courses for parents of mentally retarded children.

The training of teachers has been developed throughout the country. Although courses on a limited scale had been developed by the voluntary bodies many years ago, statutory training for the teachers of the mentally retarded was not established until 1964 when the Training Council for Teachers of the Mentally Handicapped was set up in accordance with the recommendation of the 1962 Scott Committee. Fifteen training courses were established and the courses lasted for two years, or one year for experienced teachers. Despite these training courses, in 1971 only about one-third of the teachers of the mentally retarded held any professional qualifications. Now the training of teachers of the mentally retarded is part of normal teacher training in Colleges of Education. Many universities also run advanced courses leading to diplomas or second degrees and the students can study child development in depth and also develop skills in assessment and remediation techniques to meet the needs of the mentally retarded child. Great attention is paid by the teachers to developing learning environments for the young retarded children in the schools. The pre-school child needs an adult to be near at all times and a staffing ratio of one adult to four or five children is recommended by the Department of Education and Science (1975) as being necessary to ensure adequate stimulation for each individual. Holidays pose a special problem for parents and for teachers in their programming of the children. Hospital Schools have extended school years with some staff on a rota of duty for most of the year. Some special schools for the retarded, for example the ones in Sheffield, hold play schools for

three weeks during the long summer holiday. Some of the full-time staff remain on duty and are supplemented by other teachers, and some students from Colleges of Education.

The environment for the young retarded child at school should be as much like home as possible. Some nursery classes have full-sized armchairs, cushions, carpets and rugs together with a full-sized cooker in addition to the normal nursery equipment such as water trays, sand, large push and pull toys, tricycles, bricks, a Wendy house, junk box and dressing up box, books, paper and paint together with toys to develop sensory and cognitive skills. In some schools there is a separate splash withdrawal room for boistrous play and a quiet area, where the child can be with an adult in a one to one ratio and be presented with his systematic learning programme. Separate special facilities are also sometimes made available for parents to observe their children, hold discussions and make themselves at home with the provision of their own room with a cooker or kitchen alcove. All these facilities have been planned for the new Kirkhill School in Sheffield. Guidance has been given by "Design Note 10" from the Department of Education and Science.

"The Quiet Revolution"

Since the 1970 Education (Handicapped Children) Act there has been a quiet revolution in the education of the mentally retarded child and his teacher. A great many educationists have begun to take a great interest in the mentally retarded and multiply handicapped child.

The Hester Adrian Centre, at Manchester University, headed by Professor Peter Mittler has pioneered much valuable work with the mentally handicapped and their families. Professor Jack Tizard at London University has shown how language deficits can be reduced by good language experiences and systematic training, and Professor Clarke at Hull has demonstrated that mental subnormality was a respectable subject for study by educationists. He has

shown that if tasks are presented to the retarded in small steps then they can learn easily. The National Children's Bureau published a report in 1970 entitled "Living with Handicap" stressing the total needs of the child and his parents and also recommended an inter-professional approach to meet these needs. The Warnock Committee is also looking into the present and future needs of the mentally retarded child and his family.

The Future

This study outlines some developments in the pre-school provision for the mentally retarded and its preventive, remedial supportive, compensatory education role. A consolidated study could look in greater detail at the present opportunities offered to the mentally retarded pre-school child and his family and suggested areas of research are, for example:-

1. Assessment of the programmes for the pre-school child and the effectiveness of compensatory remedial programmes.
2. Comparative studies of the effectiveness of pre-school provisions at home, in playgroups, day nurseries, nursery units for normal children and special schools in meeting the child's educational needs.
3. Effectiveness of the integration of mentally retarded pre-school children.
4. Evaluation of assessment and programming procedures of the profoundly retarded pre-school child who may have gross physical, sensory, language or behaviour problems in addition to mental retardation.
5. Evaluation of inter-professional approaches to the mentally retarded pre-school child and his family.
6. Evaluation of initial and in-service training of teachers and other professionals in meeting the needs of the pre-school handicapped child.

A National Development Group for the Mentally Handicapped is to be set up under the Chairmanship of Professor Peter Mittler to advise and develop

government policy towards the retarded. A Development Team is to be established to work closely with the group and provide specialist information. Both groups will be inter-disciplinary. Nursing services, the role of the specialists, together with the role of the voluntary organisations are to be investigated. Finally, as Mittler (1974) stated "We have only just begun to explorepossibilities of providing an educational environment for pre-school mentally retarded children .... there is still much to be learned and more to be achieved".

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